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SNS

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 RCT Support (radiation control technician) 274-8658
 User Support 241-4432
 User Office 574-4600

HFIR

Control Room 574-7035
 RCT Support (radiation control technician) 574-6713
 User Office 574-4523

SNS Café, Bldg 8600

Breakfast hours: M–F, 7:00 am – 9:30 am

Lunch hours: M–F, 10:45 am – 1:15 pm

HFIR Canteen, Bldg 7910

Lunch hours: M–F, 10:45 am – 1:15 pm

For questions or comments email us:
neutronscience@ornl.gov

Research Spotlight

Bose Einstein Condensation in Solid Helium

When superfluidity in solid helium was first reported in 2004, it created a new field of physics and extended superflow to all phases of matter: gases, liquids and solids. The apparent decoupling of the superfluid in the solid has been widely reproduced but remains controversial, associated with defects such as amorphous regions. Both superflow and superconductivity arise from Bose-Einstein condensation (BEC), so understanding superflow is a Basic Energy Science priority. “Taking advantage of the high neutron flux at SNS and the high resolution of the ARCS instrument, we are searching for BEC in solid helium in MCM-41, where the solid is 100% amorphous,” says Henry Glyde, of the University of Delaware. MCM-41 is a molecular sieve with a mesoporous structure that can be easily controlled. Measurements in the liquid in MCM-41 are being made as a bench mark. “Observation of Bose Einstein condensation in solid helium would be unambiguous verification of superflow,” Glyde says. With Glyde, the research team includes Richard Azuah (NIST), and Souleymane Omar Diallo and Douglas Abernathy of NSSD.

This Week's Users

SNS, NOMAD (BL1B)

Eugene Mamontov (ORNL NScD)
 David Wesolowski (ORNL PSD)
 Joerg Neufeind (ORNL NScD)
 Gernot Rother (ORNL PSD)
 Alexander Kolesnikov (ORNL NScD)
 Jose Banuelos (ORNL PSD)
 Suresh Chathoth (ORNL NScD)
 Joerg Neufeind (ORNL NScD)
 Sabrina Disch (Juelich)

SNS, BASIS (BL2)

Eugene Mamontov (ORNL NScD)
 Suresh M. Chathoth (ORNL NScD)
 Steven Overbury (ORNL NScD)
 Gilbert Brown (ORNL PSD)
 Suresh Chathoth (ORNL NScD)
 Daniela Anjos (ORNL PSD)

SNS, SNAP (BL3)

Bryan Chakoumakos (ORNL NScD)
 Antonio Dos Santos (ORNL NScD)

SNS, Magnetism Reflectometer (BL4A)

Xianglin Ke (ORNL NScD)
 Tao Zhu (Chinese Academy of Science)
 Hailemariam Ambaye (ORNL NScD)
 Valeria Lauter (ORNL NScD)

SNS, Liquids Reflectometer (BL4B)

Louis Perez (Univ of CA, Santa Barbara)
 Zuleikha Kurji (CA Institute of Tech)
 Paul Pirogovsky (CA Institute of Tech)
 Artemis Ailianou (ORNL NScD)
 Ladan Lynn Foose (ORNL NScD)

SNS, CNCS (BL-5)

Michael Reuter (ORNL NScD)
 Pengcheng Dai (Univ of Tenn)
 Oliver Lipscombe (Univ of Tenn)
 Miaoyin Wang (Univ of Tenn)

SNS, EQ-SANS (BL6)

Changwoo Do (Juelich)
 Michael Ohl (Juelich)

SNS, VULCAN (BL7)

Alexandru Stoica (ORNL NScD)
 Grigoreta Stoica (ORNL NScD)
 Xun-Li Wang (ORNL NScD)
 Ba Radhakrishnan (ORNL C&CSD)

SNS, POWGEN (BL11A)

Raphael Hermann (Juelich)
 Olivier Gourdon (ORNL NScD)
 Tyrel McQueen (Johns Hopkins Univ)
 John Sheckelton (Johns Hopkins Univ)
 James Vickers (Emory Univ)
 Chongchao Zhao (Emory Univ)
 Jason Hodges (ORNL NScD)

SNS, TOPAZ (BL12)

William Ratcliff (NIST)
 Karunakar Kothapalli (NIST)
 Christina Hoffmann (ORNL NScD)
 Henrik Clausen (Univ of Aarhus)
 Jacob Overgaard (Univ of Aarhus)
 Bo Iversen (Univ of Aarhus)
 Mads Joergensen (Univ of Aarhus)
 Bryan Chakoumakos (ORNL NScD)

SNS, SEQUOIA (BL17)

Masaaki Matsuda (JAEA)
 Bruce Gaulin (McMaster Univ)
 Kate Ross (McMaster Univ)
 Hiroyuki Nojiri (Tohoku Univ)
 Shunsuke Yoshii (Tohoku Univ)
 Takayuki Morioka (Tohoku Univ)
 Louis Santodonato (ORNL NScD)

SNS, ARCS (BL18)

Richard Azuah (NCNR)
 Souleymane Diallo (ORNL NScD)

Local Happening

6/7/2011 – Seminar

Insight into the Kinetics of Oligomer Formation During Amyloidosis, George Belfort, Rensselaer Polytechnic Institute, SNS/8600, Conference Room C-156, 10:30 – 11:30 AM

6/8/2011 – Seminar

In Situ Time-Resolved Neutron Scattering Study of Dynamic Material Behavior under Nonequilibrium Thermomechanical Processing Conditions, Zhili Feng, Bldg. 4500N, Weinberg Auditorium, 10 – 11 AM

6/9/2011 – Seminar

Shifting Paradigms in Polymer Crystallization and Directional Self-Assembly, M. Muthukumar, University of Massachusetts, Bldg. 8600, Iran Thomas Auditorium, 4:00-5:00 PM

6/9/2011 – Seminar

Shifting Paradigms in Polymer Crystallization and Directional Self-Assembly, 8600, Iran Thomas Auditorium (Rm A-103), 4 - 5 PM

6/10/2011 – Seminar

Status of ESS Target Development, Feri Mezei, Bldg. 8600, Conference Room C-152, 10:00 – 11:30 AM